

CLAIMS

What is claimed is:

1. A method, in an image scanner, for detecting a defect, comprising:
 - determining whether lines are present in image data for multiple color channels; and
 - determining whether calibration gains for photosensors corresponding to the lines are normal.
2. A method for detecting a defect on a calibration target for an image scanner, comprising:
 - determining that a gain associated with a particular photosensor, in a particular line-array of photosensors, in a photosensor assembly, exceeds a predetermined gain threshold, the gain having been calibrated using the calibration target;
 - determining that an image intensity measurement for the particular photosensor exceeds a predetermined intensity threshold; and
 - determining that an image intensity measurement for each photosensor, physically corresponding to the particular photosensor, in all line-arrays in the photosensor assembly other than the particular line-array of photosensors, does not exceed the predetermined intensity threshold.

3. A method for detecting a defect in image data, comprising:

determining that intensity data, from a particular photosensor, in a particular line-array of photosensors, in a photosensor assembly, is less than a predetermined intensity threshold; and

5 determining that intensity data, for each photosensor, physically corresponding to the particular photosensor, in all line-arrays in the photosensor assembly other than the particular line-array of photosensors, is not less than the predetermined intensity threshold.

4. The method of claim 3, further comprising:

determining that the defect was present during calibration, by determining that a gain for the particular photosensor, determined during calibration, exceeds a predetermined gain threshold.

5. The method of claim 3, further comprising:

determining that the defect was not present during calibration, by determining that a gain for the particular photosensor, determined during calibration, does not exceed a predetermined gain threshold.

6. A method, in an image scanner, for detecting a defect, comprising:

determining whether a line is present in image data for a first color channel; and determining whether the line is not present in image data for a second color channel, where the spectral bandwidths of light received by
5 photosensors for the first and second color channels are identical or nearly identical.

7. The method of claim 6, further comprising:

determining that the defect is on a calibration target when the line has an intensity that is greater than a predetermined intensity threshold.

8. The method of claim 6, further comprising:

determining that the defect was present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is greater than a predetermined gain threshold.

9. The method of claim 6, further comprising:

determining that the defect was not present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is not greater than a predetermined gain threshold.

10. A scanner, comprising:

a first line-array of photosensors;
a second line-array of photosensors;
a processor; and

the processor determining that a defect exists when lines are present in image data from only one of the first and second line-arrays of photosensors and when calibration gains, associated with photosensors corresponding to the lines, are normal.

11. A scanner, comprising:

a calibration target;

a photosensor assembly comprising a plurality of line-arrays of
photosensors;

a processor;

a particular photosensor, in a particular line-array of photosensors, in the
photosensor assembly, having an associated gain that exceeds a
predetermined gain threshold, the gain having been calibrated using the
calibration target;

the particular photosensor having an associated image intensity measurement
that exceeds a predetermined intensity threshold; and

the processor determining that a defect exists when an image intensity
measurement for each photosensor physically corresponding to the particular
photosensor, in all line-arrays in the photosensor assembly other than the
particular line-array of photosensors, does not exceed the predetermined
intensity threshold.

12. A scanner, comprising:

a calibration target;
a photosensor assembly comprising a plurality of line-arrays of
photosensors;
a processor;
a particular photosensor, in a particular line-array of photosensors, in a
photosensor assembly, having an associated image intensity measurement
that is less than a predetermined intensity threshold; and
the processor determining that a defect exists when an intensity output, for
each photosensor physically corresponding to the particular photosensor, in
all line-arrays in the photosensor assembly other than the particular line-
array of photosensors, is not less than the predetermined intensity threshold.

13. The scanner of claim 12, further comprising:

the processor determining that the defect was present during calibration, by
determining that a gain associated with the particular photosensor,
determined during calibration, exceeds a predetermined gain threshold.

14. The scanner of claim 12, further comprising:

the processor determining that the defect was not present during calibration,
by determining that a gain associated with the particular photosensor,
determined during calibration, does not exceed a predetermined gain
threshold.

15. A scanner, comprising:

a first line-array of photosensors;
a second line-array of photosensors, where the first and second line-arrays of photosensors receive spectral bandwidths of light that are substantially the same;
a processor; and
the processor determining that a defect exists when a line is present in image data for only one of the first and second line-arrays of photosensors.

16. The scanner of claim 15, further comprising:

a calibration target; and
the processor determining that the defect is on the calibration target when the line has an intensity that is greater than a predetermined intensity threshold.

17. The scanner of claim 15, further comprising:

the processor determining that the defect was present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is greater than a predetermined gain threshold.

18. The scanner of claim 15, further comprising:

the processor determining that the defect was not present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is not greater than a predetermined gain threshold.